



0072345

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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May 3, 2007

Mr. Keith A. Klein, Manager  
Richland Operations Office  
United States Department of Energy  
P.O. Box 550, MSIN: A7-50  
Richland, Washington 99352

Ms. Shirley J. Olinger, Acting Manager  
Office of River Protection  
United States Department of Energy  
P.O. Box 450, MSIN: H6-60  
Richland, Washington 99352

Re: Issuance of Revision A of the Hanford Site Air Operating Permit

Dear Mr. Klein and Ms. Olinger:

Per Washington Administrative Code (WAC) 173-401-720, the Department of Ecology, as the permitting authority, issues this Administrative Amendment as Revision A of the Hanford Site Air Operating Permit (AOP), # 00-05-06, Renewal 1. The permit conditions and requirements are effective immediately.

This revision includes modifications in AOP Attachment 1 for Non-Radioactive Air Emissions (see Enclosure I with instructions) and in AOP Attachment 2 for Radioactive Air Emissions (see Enclosure II with instructions). If you have questions, please contact Doug Hendrickson at 509-372-7983 or Oliver Wang at 509-372-7932.

Sincerely,

Jane A. Hedges, Program Manager  
Nuclear Waste Program

Oliver Wang, P.E.  
Nuclear Waste Program



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- Enclosure I: Modifications by Ecology for Attachment 1 (Non-Radioactive Air Emissions)  
Enclosure II: Modifications by Department of Health for Attachment 2 (Radioactive Air Emissions)

EXPIRES 5/26/2008

cc: See Page 2

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Mr. Klein and Ms. Olinger

May 3, 2007

Page 2

cc w/enc:

Laurie Kral, EPA

Davis Zhen, EPA

Dennis Bowser, USDOE

Mary Jarvis, USDOE

Dave Lauer, BCAA

John Schmidt, WDOH

Administrative Record 4-0-9

Environmental Portal

cc w/o enc:

Roylene Cunningham, EPA

Doug Hardesty, EPA

Nancy Helm, EPA

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Andy Ginsburg, ODEQ

Ken Niles, ODOE

John Martell, WDOH

## **Enclosure I: Modifications by Ecology for Non-Radioactive Air Emissions**

Replace Page ATT 1-22: A footnote is added to detail the extension of the Approval Order DE05NWP-001 after 18 months of inaction. No new conditions are added.

Add Pages ATT 1-83-i through -iii (total three pages): Add 3 pages at the end of AOP Attachment 1 to describe 7 conditions from Approval Order DE06NWP-002 (200 Area Diesel Engines supporting 336 High Bay Testing Facility).

Page ATT 1-64: No new conditions added for DE02NWP-002, Amendment 3. Condition 3.4 of the Approval Order DE02NWP-002, Amendment 3, requests that sampling ports and platforms for testing be safely provided according to 40CFR60.8. This condition is not added on Page ATT 1-64 as an AOP condition for testing and monitoring.

No pages added for DE05NWP-003: Approved on March 23, 2005, Approval Order DE05NWP-003 for a Structural Steel Fire Proofing Coating System at the Hanford Waste Immobilization and Treatment Facility is deemed void. Ecology letter of December 20, 2006, from Doug Hendrickson, Nuclear Waste Program, to Roy Schepens, Manager, United States Department of Energy (USDOE) - Office of River Protection, notified the USDOE that inspection had determined that construction had not commenced within eighteen months and that the authorization was void in accord with Washington Administrative Code 173-400-110(9).

Revised Attachment 1 of the AOP can be read following the link below:

### **Attachment 1: Non-radioactive emissions**

<http://www.ecy.wa.gov/programs/nwp/pdf/aop/Mod%20A%20AOP/Attachment%201%20Revision%20A%2004122007.pdf>

March 2007

Revision A of 2006 AOP Renewal

**Discharge Point: Ventilation Systems for 241-AN and 241 AW Tank Farms**

200E, Tank Farms – Ventilation Systems for 241-AN and 241 AW Tank Farms

Requirement Citation (WAC or Order Citation): WAC 173-400-040(1), DE05NWP-001 \*

**Condition Approval:** 2/18/2005 \*

**Condition:** EMISSION LIMITS

Visible emissions from each stack shall not exceed five (5) percent.

**Periodic Monitoring:** In accordance with the Hanford Air Operating Permit Section 2.1, Visible Emissions Surveys, Tier 3. Should visible emissions be observed which are not solely attributable to water condensation, compliance with Approval Condition shall be met by performing an opacity determination utilizing 40 Code of Federal Regulations (CFR) Part 60, Appendix A, Method 9, providing that such determination shall not place the visible emission observer in hazard greater than that identified for the general worker.

**Test Method:** 40 Code of Federal Regulations (CFR) Part 60, Appendix A, Method 9, as applicable.

**Test Frequency:** None Specified

**Required Records:** Visible emission surveys records in which a visible emission was observed, which are not solely attributable to water condensation.

**State-Only:** Yes.

**Calculation Model:** Not applicable.

- \* Per Ecology letter from Jane Hedges, Program Manager, Nuclear Waste Program, to Roy Schepens, Manager, DOE Office of River Protection, on August 17, 2006, NOC Order No. DE05NWP-001 issued on 2/18/2005 was extended through December 31, 2010, provided the approved construction of the new 241-AN Tank Farm ventilation system is complete and operating by January 1, 2010. Ecology reviewed and agreed that the treatment technology selected to be installed in the order does continue to represent T-BACT.

**Discharge Point Diesel Engines – 336 Building**

300 Area, 2 Diesel Engines Supporting 336 High Bay Testing Facility

Requirement Citation (WAC or Order Citation): DE06NWP-002

**Condition Approval 7/20/2006**

Condition: Visible emissions will not exceed 10%.  
Periodic Monitoring: Recordkeeping.  
Test Method: Tier 1 Visible Emission Survey (AOP 2.1) and/or EPA Method 9.  
Test Frequency: Quarterly.  
Required Records: Operating record and log.  
State-Only: No.  
Calculation Model: Not applicable.

**Condition Approval 7/20/2006**

Condition: Emissions of Nitrogen Oxides (NO<sub>x</sub>) and Non-methane Hydrocarbons (NMHC) will not exceed 6.35 tons per year.  
Periodic Monitoring: Recordkeeping.  
Test Method: Compliance demonstrated by Engine Limitation<sup>1</sup> and Operational Limitation<sup>2</sup> below.  
Test Frequency: Not applicable.  
Required Records: Compliance demonstration records, and operating record and log.  
State-Only: No.  
Calculation Model: Not applicable.

**Condition Approval 7/20/2006**

Condition: Emissions of Carbon Monoxide (CO) will not exceed 3.47 tons per year.  
Periodic Monitoring: Recordkeeping.  
Test Method: Compliance demonstrated by Engine Limitation<sup>1</sup> and Operational Limitation<sup>2</sup> below.  
Test Frequency: Not applicable.  
Required Records: Compliance demonstration records, and operating record and log.  
State-Only: No.  
Calculation Model: Not applicable.

**Condition Approval 7/20/2006**

Condition: Emissions of particulate matter (PM) will not exceed 0.20 tons per year.  
Periodic Monitoring: Recordkeeping.  
Test Method: Compliance demonstrated by Engine Limitation<sup>1</sup> and Operational Limitation<sup>2</sup> below.  
Test Frequency: Not applicable.  
Required Records: Compliance demonstration records, and operating record and log.  
State-Only: No.  
Calculation Model: Not applicable.

**Condition Approval**      **7/20/2006**  
Condition: Emissions of Toxic Air Pollutants (TAPs) identified within the Notice of Construction for which SQERs are defined, are not to exceed SQERs of WAC 173-460-080(2)(e).  
Periodic Monitoring: Recordkeeping.  
Test Method: Compliance demonstrated by:

- Engine Limitation<sup>1</sup> Conditions 1.1 and 1.3, and Operational Limitation<sup>2</sup> Condition 2.3, OR
- Calculation of Toxic Air Pollutant emissions, employing air pollutant emission factors of AP 42<sup>3</sup>, Table 3.3-2.

  
Test Frequency: Not applicable.  
Required Records: Compliance demonstration records, and operating record and log.  
State-Only: No.  
Calculation Model: Not applicable.

**Condition Approval**      **7/20/2006**  
Condition: Emissions of Polyaromatic Hydrocarbons (PAHs) will not result in ambient concentrations exceeding 4.8E-03 µg/m<sup>3</sup>.  
Periodic Monitoring: Recordkeeping.  
Test Method: Compliance demonstrated by:

- Engine Limitation<sup>1</sup> Conditions 1.1 and 1.3, and Operational Limitation<sup>2</sup> Condition 2.3, OR
- Calculation of Toxic Air Pollutant emissions, employing PAH air pollutant emission factors of AP 42<sup>3</sup>, Table 3.3-2, and dispersion analysis.

  
Test Frequency: Not applicable.  
Required Records: Compliance demonstration records, and operating record and log.  
State-Only: No.  
Calculation Model: Not applicable.

**Condition Approval**      **7/20/2006**  
Condition: Emissions of sulfur dioxide (SO<sub>2</sub>) is not to exceed 0.20 tons per year.  
Periodic Monitoring: Recordkeeping.  
Test Method: Compliance demonstrated by use of fuel containing no greater than 0.05 weight percent sulfur (500 parts per million by weight).  
Test Frequency: Not applicable.  
Required Records: Compliance demonstration records, and/or fuel analysis records.  
State-Only: No.  
Calculation Model: Not applicable.

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1. Engine Limitation:

- 1.1 Installation of engines certified to meet Tier 2 (or higher Tier) emission limitations of 40 CFR 89.
- 1.2 Installation of no more than two engines at any given time.
- 1.3 Installation of no engines rated above 450 kW.

2. Operational Limitation:

- 2.1 All recommended operation and equipment maintenance provisions supplied by the manufacturer(s) of the engine(s) will be current.
- 2.2 A non-resettable hour meter will be installed on each engine and operated.
- 2.3 Operational hours of use for all engines under this order will not result in a ratio exceeding 1.0 as calculated by the following equation.

$$\frac{\sum_{i=1}^n \frac{\text{Engine Rating (kW)}_i}{450 \text{ kW}} (\text{Engine Operating Hours})_i}{2000 \text{ hours}} \leq 1.0$$

3. AP 42, Fifth Edition, *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, <http://www.epa.gov/ttn/chief/ap42/index.html>

## **Enclosure II: Modifications by Health for Radioactive Air Emissions**

The update instructions and change history for Attachment 2 in Revision A are tabulated in the following tables.

1. FF-01 update instructions for hard copies.
2. FF-01 change history after 2006 AOP Renewal.

Revised FF-01 in Attachment 2 of the AOP can be read following the link below:

### **Attachment 2: FF-01 Hanford Site Radioactive Emissions License**

<http://www.ecy.wa.gov/programs/nwp/pdf/aop/Mod%20A%20AOP/Attachment%202%20Revision%20A%2004122007.pdf>



**Table 1. Update Instructions for Hard Paper Copies (Attachment 2 of AOP).**

<b>Remove</b>	<b>Insert Dated 3/30/07</b>	<b>Page # to #</b>	<b>Comments</b>
EU ID 50	EU ID 50	1 to 6	Complete Replacement
EU ID 57	EU ID 57	1 to 9	Complete Replacement
EU ID 58	EU ID 58	1 to 6	Complete Replacement
EU ID 77	EU ID 77	1 to 1	Complete Replacement
EU ID 165		None	Emission Unit Obsoleted
EU ID 166		None	Emission Unit Obsoleted
EU ID 193	EU ID 193	1 to 4	Complete Replacement
EU ID 203	EU ID 203	1 to 4	Complete Replacement
EU ID 208		None	Emission Unit Obsoleted
EU ID 213		None	Emission Unit Obsoleted
EU ID 234		None	Emission Unit Obsoleted
EU ID 267	EU ID 267	1 to 1	Complete Replacement
EU ID 269	EU ID 269	1 to 1	Complete Replacement
EU ID 294	EU ID 294	1 to 1	Complete Replacement
EU ID 314	EU ID 314	1 to 8	Complete Replacement
EU ID 443	EU ID 443 (01/31/2007)	1 to 3	Complete Replacement
EU ID 447	EU ID 447	1 to 10	Complete Replacement
EU ID 455	EU ID 455	6 to 9	Added NOC 719 to existing Emission Unit
EU ID 477		None	Emission Unit Moved to Table 2-1
EU ID 486	EU ID 486	1 to 98	Complete Replacement
EU ID 498	EU ID 498	1 to 14	Complete Replacement
EU ID 738	EU ID 738	1 to 3	Complete Replacement
EU ID 749	EU ID 749	1 to 7	Complete Replacement
EU ID 755	EU ID 755	1 to 5	Complete Replacement – Removed NOC 700 Inserted NOC 719
EU ID 756	EU ID 756	1 to 5	Complete Replacement
EU ID 885	EU ID 885	1 to 4	Complete Replacement
EU ID 886	EU ID 886	1 to 4	Complete Replacement
EU ID 887		None	Emission Unit Moved to Table 2-1
EU ID 894	EU ID 894	1 to 2	Complete Replacement
EU ID 912	EU ID 912	1 to 3	Complete Replacement
EU ID 959	EU ID 959	1 to 3	Complete Replacement
EU ID 969	EU ID 969	1 to 3	Complete Replacement
	New EU ID 1181 NOC ID 719	1 to 5	Added New Emission Unit
	New EU ID 1183 NOC ID 656	1 to 2	Added New Emission Unit
Table 2-1	Table 2-1	1 to 3	Complete Replacement

Table 2- Changes History for March 31, 2007

Title	Type of Change	Category	ID/NAME	Date Changed	Completed
RCF	Removal/Became CERCLA	NOC	EU 443 - NOC ID 675 Operation of the Radiological Counting Facility Removed	31-Jan-07	Yes
Tank Farms	Closure	Emission Unit	EU ID 165 296-S-22	31-Jan-07	Yes
Tank Farms	Closure	Emission Unit	EU ID 166 296-T-18	31-Jan-07	Yes
Tank Farms	Closure	Emission Unit	EU ID 208 296-B-28	31-Jan-07	Yes
Tank Farms	Closure	Emission Unit	EU ID 213 296-C-5	31-Jan-07	Yes
Tank Farms	Closure	Emission Unit	EU ID 234 296-P-16	31-Jan-07	Yes
T-Plant	Revision	Emission Unit	EU 314 291-T-1	30-Mar-07	Yes
WRAP	Revision	Emission Unit	EU 193 296-W-4	30-Mar-07	Yes
TRU Waste	New EU and Modification	Emission Unit	EU 1181 - Categorical Drum Venting System 2	30-Mar-07	Yes
TRU Waste	Modification	Emission Unit	EU 455 HEPA Vacuums	30-Mar-07	Yes
TRU Waste	Modification	Emission Unit	EU 486 200 Area Diffuse/Fugitive	30-Mar-07	Yes
TRU Waste	Modification	Emission Unit	EU 755 Mobile Drum Venting System (Active Vent)	30-Mar-07	Yes
TRU Waste	Modification	Emission Unit	EU 756 Mobile Drum Venting System (Passive Vent)	30-Mar-07	Yes
HSGS	Application	NOC	EU 1183 - NOC ID 656 Approval to Construct to Prepare for Head Space Gas Sampling (HSGS) Analysis at M0-444	30-Mar-07	Yes
	Revision	NOC	EU IDs 50, 57, 58, 486, 498, 749, 885, and 886 - Revision of NOC ID 703	30-Mar-07	Yes
	Revision	Emission Unit	EU ID 486 216-A-40	30-Mar-07	Yes
	Revision	Emission Unit	EU ID 912 244-A-DCRT Annulus	30-Mar-07	Yes
	Revision	Emission Unit	EU ID 959 244-S Annulus HEPA	30-Mar-07	Yes
	Revision	Emission Unit	EU ID 969 244-TX Annulus HEPA	30-Mar-07	Yes
	Revision	Emission Unit	EU ID 269 241-B-101	30-Mar-07	Yes
	Revision	Emission Unit	EU ID 267 241-B-201	30-Mar-07	Yes
	Revision	Emission Unit	EU ID 294 241-BY-107	30-Mar-07	Yes
	Revision	Emission Unit	EU ID 894 241-UX-302A	30-Mar-07	Yes
	Revision	Emission Unit	EU ID 738 244-A-DCRT Primary	30-Mar-07	Yes
	Revision	Emission Unit	EU ID 912 244-A-DCRT Annulus	30-Mar-07	Yes
	Revision	Emission Unit	EU ID 77 241-T-202	30-Mar-07	Yes
	Revision	Emission Unit	EU ID 203 241-SX-112	30-Mar-07	Yes
FF-01 License	Revision	Emission Unit	Table 2-1	30-Mar-07	Yes